AIR QUALITY MANAGEMENT DISTRICT

STATEMENT OF BASIS FOR RENEWAL OF THE TITLE V FEDERAL OPERATING PERMIT

TITLE V PERMIT NO.: TV2010-16-01

DATE: February 2, 2011

REVIEWING ENGINEER: Jeff Weiss

A. FACILITY INFORMATION:

FACILITY NAME: University of California, Davis Medical Center (UCDMC)

LOCATION: 4800 2nd Avenue

Sacramento, CA 95817

MAILING ADDRESS: 4800 2nd Avenue, Suite 2500

Sacramento, CA 95817

RESPONSIBLE OFFICIAL: Vincent Johnson

Chief Operating Officer - Medical Center

(916) 703-5470

CONTACT PERSON: John Danby

Environmental Programs Specialist Environment Health and Safety

(916) 734-7329

B. PURPOSE OF THIS STATEMENT OF BASIS

The Title V Federal Operating Permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions." The purpose of this Statement of Basis is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This Statement of Basis also includes background narrative and explanations of regulatory decisions made by the SMAQMD. It should be emphasized that this Statement of Basis, while based on information contained in the permit, is a separate document and is not, itself, an enforceable term and condition of the permit.

C. Permit Action History

This Statement of Basis is for the 2nd renewal of UCDMC's existing Title V Federal Operating Permit No. TV2005-16-02. The existing permit expires on June 14, 2011.

The following permit actions have occurred since the initial Federal Operating Permit No. TV1999-16-01 was issued:

Permit Action	<u>Date</u>	Permit No.
Initial Title V Federal Operating Permit 1st Minor Modification 2nd Minor Modification 3rd Minor Modification 4th Minor Modification	06-14-2001 04-09-2002 03-18-2003 08-10-2004 07-11-2005	TV1999-16-01 TV1999-16-02 TV1999-16-03 TV1999-16-04 TV1999-16-05
1st Permit Renewal 1st Minor Modification	06-14-2006 06-08-2010	TV2005-16-01 TV2005-16-02

This 2nd permit renewal action will be assigned the permit number TV2010-16-01.

As part of this permit renewal, UCDMC has requested a change in the responsible official from Dr. Shelton Duruisseau to Mr. Vincent Johnson. UCDMC has also requested that the following equipment be added to the permit.

IC Engine Bldg. 34, Emergency Use, 1502 hp.

IC Engine PET Trailer, Emergency Use, 157 hp

UCDMC has also requested that the following revisions be made to permit for the following pieces of equipment

IC Engine Lot 7, Emergency Use, 750 hp

Emission factor change for ROC, NOx, PM10, and CO from USEPA AP-42 values to more accurate manufacturer's data.

Gasoline Dispensing Facility

Equipment was retrofitted with state mandated Phase II enhanced vapor recovery (EVR) equipment.

D. Facility Description

The following facility description is for informational purposes only and does not contain any applicable federally enforceable requirements.

The University of California, Davis operates the UC Davis Medical Center in Sacramento. The UC Davis Medical Center is a health care provider for the community and a teaching hospital for the UC Davis School of Medicine.

The UC Davis Medical Center is located on 140 acres in central Sacramento, three miles from the state Capitol and 20 miles from the main UC Davis campus. The University established the Medical Center in 1973 to support the clinical and research missions of the then new UC Davis School of Medicine. Licensed for 613 beds and fully accredited, UC Davis Medical Center is one of the region's Level I comprehensive adult and pediatric trauma center.

Electrical power for the facility is generated from an on-site cogeneration central power plant. The electrical generation plant uses a natural gas fueled gas turbine to generate electricity. Heat generated from the equipment is captured and used to produce steam for heating and cooling. In addition, four large boilers (with emergency use diesel fuel) and eight smaller natural gas fueled boilers provide steam when the gas turbine capacity is exceeded or the gas turbine is out of service.

Emergency electrical power is provided by ten diesel fueled internal combustion engines driving electrical generators. Emergency water pumping for fire fighting is provided by one internal combustion engine driving a fire pump.

A gasoline dispensing facility is used to fuel vehicles that are used both on-site and off-site.

Permit No. TV2010-16-01

E. Significant Emissions Unit Information

1. GAS TURBINE SYSTEM

Gas Turbine

SMAQMD Permit No.: P/O 17549 Manufacturer: General Electric

Model No.: LM2500

Type: Combined Cycle Heat Input Rating: 260 MMBTU/hour

Fuel: Natural gas
Power Rating: 24 MW
Location: Central Plant

Equipped with: 4 cooling towers rated at 9500 gpm/cell

NOx Air Pollution Control System Serving the Gas Turbine

SMAQMD Permit No.: P/O 10909

Control Device: Selective catalytic reduction

Manufacturer: Babcock and Wilcox

Location: Central Plant

CO Air Pollution Control System Serving the Gas Turbine

SMAQMD Permit No.: P/O 10910

Control Device: Oxidation catalyst

Manufacturer: Engelhard Corporation, Model Catco 620HC

Location: Central Plant

2. BOILER NO. 1

SMAQMD Permit No.: P/O 20216

Make: Johnston Boiler Company Model: PFTA750-4LG-150S

Serial No.: 9357-04

Rating: 31.5 MMBTU/hour

Fuel Natural Gas
Emergency fuel: Diesel No. 2
Location: Central Plant

3. BOILER NO. 2

SMAQMD Permit No.: P/O 20217

Make: Johnston Boiler Company Model: PFTA750-4LG-150S

Serial No.: 9357-03

Rating: 31.5 MMBTU/hour

Fuel Natural Gas
Emergency fuel: Diesel No. 2
Location: Central Plant

Permit No. TV2010-16-01

E. Significant Emissions Unit Information (continued)

4. BOILER NO. 3

SMAQMD Permit No.: P/O 20218

Make: Johnston Boiler Company Model: PFTA750-4LG-150S

Serial No.: 9357-02

Rating: 31.5 MMBTU/hour

Fuel Natural Gas
Emergency fuel: Diesel No. 2
Location: Central Plant

5. BOILER NO. 4

SMAQMD Permit No.: P/O 20219

Make: Johnston Boiler Company Model: PFTA750-4LG-150S

Serial No.: 9357-01

Rating: 31.5 MMBTU/hour

Fuel Natural Gas
Emergency fuel: Diesel No. 2
Location: Central Plant

6. 8 BOILERS, NOS. 1-8 (CALIFORNIA SPECIALS)

SMAQMD Permit No.: P/O 12979 Make: Bryan

Model: MOD-400S-100-G

Serial No.: 52790, 52791, 52797, 52805, 52858, 52859, 52865, & 52868

Rating: 0.4 MMBTU/hour each boiler

Fuel Natural Gas

Location: Building 01/02 Main Hospital

7. IC ENGINE NO. 1, EMERGENCY USE

SMAQMD Permit No.: P/O 18533 Manufacturer: Caterpillar

Model: 3516B DITA SC 140F

Serial No.: 6HN00135

Engine BHP: 2876 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

US EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Central Plant

E. Significant Emissions Unit Information (continued)

8. IC ENGINE NO. 2, EMERGENCY USE

SMAQMD Permit No.: P/O 18534 Manufacturer: Caterpillar

Model: 3516B DITA SC 140F

Serial No.: 6HN00136

Engine BHP: 2876 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Central Plant

9. IC ENGINE NO. 3, EMERGENCY USE

SMAQMD Permit No.: P/O 18535 Manufacturer: Caterpillar

Model: 3516B DITA SC 140F

Serial No.: 6HN00137

Engine BHP: 2876 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Central Plant

10. IC ENGINE NO. 4, EMERGENCY USE

SMAQMD Permit No.: P/O 18536 Manufacturer: Caterpillar

Model: 3516B DITA SC 140F

Serial No.: 6HN00134

Engine BHP: 2876 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Central Plant

11. IC ENGINE NO. 5, EMERGENCY USE

SMAQMD Permit No.: P/O 14475 Manufacturer: Caterpillar

Model: 3516B DITA SC 140F

Serial No.: 6HN00361

Engine BHP: 2876 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

EPA Non-Road Tier Std.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Central Plant

E. Significant Emissions Unit Information (continued)

12. IC ENGINE LOT 7, EMERGENCY USE

SMAQMD Permit No.: P/O 22314
Manufacturer: Cummins
Model: KTTA19G2
Serial No.: 37124440

Engine BHP: 750 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Building 64

13. IC ENGINE FIRE PUMP, EMERGENCY USE

SMAQMD Permit No.: P/O 10707 Manufacturer: Caterpillar

Model: FM/ULI/3208DINA

Serial No.: 90N72000

Engine BHP: 156 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Fire Pump

Location: Building 92

14. IC ENGINE PORTABLE 890 HP, EMERGENCY USE

SMAQMD Permit No.: P/O 11494
Manufacturer: Caterpillar
Model: 3412
Serial No.: 81Z08979

Engine BHP: 890 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Portable

15. IC ENGINE PORTABLE 68 HP, EMERGENCY USE

SMAQMD Permit No.: P/O 13421
Manufacturer: Cummins
Model: 4B3.9-G
Serial No.: 44982109

Engine BHP: 68 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: N/A EPA Tier Standard: Tier 0

Driving: Emergency Electrical generator

Location: Portable

E. Significant Emissions Unit Information (continued)

16. IC ENGINE PET TRAILER, EMERGENCY USE

SMAQMD Permit No.: P/O 19775

Manufacturer: John Deere

Model: 4045H275H

Serial No.: PE4045H378606

Engine BHP: 157 bhp @ 1800 rpm

Fuel Type: CARB Diesel No. 2

U.S EPA Family No.: 4JDXL06.8039

EPA Tier Standard: Tier 2

Driving: Emergency Electrical generator

Location: Pet Scanner Trailer

17. IC ENGINE BUILDING 34, EMERGENCY USE

SMAQMD Permit No.: P/O 22060 Manufacturer: Caterpillar Model: C32

Serial No.: SYC02850

Engine BHP: 1502 bhp @ 1800 rpm Fuel Type: CARB Diesel No. 2 U.S EPA Family No.: 8CPXL32.0ESW

EPA Tier Standard: Tier 2

Driving: Emergency Electrical generator

Location: Building 34

18. GASOLINE/METHANOL STORAGE AND DISPENSING FACILITY

SMAQMD Permit No.: P/O 21510

Two 10,000 gallon underground gasoline/methanol storage tanks with three vapor recovery nozzles. The underground gasoline storage tanks have California Air Resources Board (CARB) certified Phase 1 EVR vapor recovery equipment. The dispensing equipment has a CARB certified Phase 2 EVR vapor recovery system.

[The facility also has one 10,000 gallon underground diesel tank with two diesel nozzles that are exempt equipment.]

F. Insignificant Emissions Unit Information

Equipment Description	Basis for Determination of Insignificant Emissions Unit is made based on SMAQMD "List and Criteria", Part B, Section 5 modified April 2001.
A. Combustion equipment	Equipment is rated no more than 5 million BTU/hr and fired exclusively with natural gas.
B. Internal combustion engines (piston type)	Engines rated at 50 hp or less.
C. Printing, coating, or laminating activities.	Activities use less than 2 gallons/day of graphic arts materials.
D. Gasoline storage	Containers have a maximum capacity of 1500 gallons and are used only for gasoline storage.
E. Fuel oil storage	Containers are used to store fuel oil with a specific gravity of 0.9042 or higher.
F. Unheated organic material storage.	Containers are used exclusively to store unheated organic material with an initial boiling point of 150°C or greater or a vapor pressure of no more than 5 mmHg.
G. Unheated organic liquid storage.	Containers are less than 250 gallons and used exclusively to store unheated organic liquid.
H. Unheated organic liquid storage.	Containers are less than 6077 gallons and used exclusively for underground storage of unheated organic liquid with a vapor pressure of no more than 75 mmHg.
I. Adhesive operations	Adhesive operations use less than 173 gallons of adhesives in a 12 month period.
J. Surface Coating Activities using less than 1 gallon/day	Surface coating activities use less than 1 gallon/day of surfacing coating and solvents containing either VOC or HAPs.
K. Surface Coating Activities using less than 10,950 gallons/year.	Surface coating activities use less than 10,950 gallons/year of coatings having a VOC content of less than 20 grams/liter.
L. Solvent cleaning.	Solvent cleaning activities use no more than 1 gallon/day of solvent containing either VOC or HAPS.
M. Cleaning equipment.	Cleaning equipment is unheated, non-conveyorized and has an open surface area of no more than 10.8 sq. ft.

F. Insignificant Emissions Unit Information (continued)

Equipment Description	Basis for Determination of Insignificant Emissions Unit is made based on SMAQMD "List and Criteria", Part B, Section 5 modified April 2001.
	and internal volume of no more than 92.5 gallons which uses organic solvents with an initial boiling point of 302°F or greater in which the operation loses less than 25 gallons/year of solvent exclusive of solvent loss from recycling or disposal.
N. Solvent wipe cleaning.	Solvent wipe cleaning operations utilize container applicators and occurs at a facility which emits no more than 5 tons/year of VOC from all solvent wipe-cleaning operations or which purchases no more than 1500 gallons/year of solvent.
O. Abrasive blasting equipment using a suspension of abrasive material in water venting to control equipment.	Blast cleaning equipment uses a suspension of abrasive material in water venting to control equipment.
P. Abrasive blasting equipment vented to control equipment which discharges back to the room.	Abrasive blasting equipment vents to a control device that discharges back to the room.
Q. Brazing, soldering, welding, or cutting equipment used in manufacturing and construction activities.	Brazing, soldering, welding, or cutting equipment is used in manufacturing and construction activities with the potential to emit HAP metals in which the total emissions of HAPs do not exceed 0.5 tons/year.
R. Biotechnology manufacturing	Biomedical devices and diagnostic kits used exclusively in FDA approved clinical trials which emits less than 5 tons/year of uncontrolled VOC emissions.
S. Laboratory fume hoods and vents.	Laboratory fume hoods are used exclusively for the purposes of teaching, research, or quality control.
T. Refrigeration units	Refrigeration units contain less than 50 lbs of refrigerant and are not used in conjunction with air pollution control equipment.

G. Alternate Operating Scenarios

None requested by the permittee.

H. Facility Emissions

Maximum Allowable Emissions (tons/year)							
Equipment	ROC	NOx	SO ₂	PM10	со	Single HAP	Total HAPs
Gas Turbine	26.5 (A)	21.2 (B)	0.7	12.2 (C)	40.8	1.0	1.8
Large Boilers (4)	2.2 (A)	6.0 (B)	0.4	5.5 (C)	39.4	0.3	0.3
Large IC Engines (5), Emergency Use	1.7	65.8	0.7	1.4	6.3	0.1	0.3
Small Boilers (8)	0.1 (A)	1.4 (B)	0.01	0.2 (C)	4.2	0.0	0.0
Small IC Engines (6), Emergency Use	0.4	6.5	0.2	0.3	1.9	0.0	0.1
Gasoline Dispensing Facility	0.4 (A)	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions	29.5	99.7	2.0	16.3	92.6	1.4	2.5

⁽A) The gas turbine, (4) large boilers, (8) small boilers and gasoline dispensing are limited to a combined maximum

ROC emission of 150 lb/day by permit condition (equivalent to 27.4 tons/year of ROC).

(B) The gas turbine, (4) large boilers and (8) small boilers are limited to a combined maximum NOx emission of 150 lb/day by permit condition (equivalent to 27.4 tons/year of NOx).

(C) The gas turbine, (4) large boilers and (8) small boilers are limited to a combined maximum PM10 emission of 80

lb/day by permit condition (equivalent to 14.6 tons/year of PM10).

SMAQMD Rule 105 - Emission Statement

SIP Approved: 06-06-2008 (73 FR 32240)

09-05-1996 rule version is SIP approved

Rule Description: This rule requires the facility to provide annual emission data.

Compliance Status: The permittee has provided annual emission data as required and is in

compliance.

SMAQMD Rule 201 - General Permit Requirements

SIP Approved: 07-13-1987 (52 FR 26148)

11-20-1984 rule version is SIP approved

08-24-2006 rule version is the current version and is not SIP approved

Rule Description: This rule provides an orderly procedure for the review of new sources of air

pollution and of the modification and operation of existing sources through

the issuance of permits.

Compliance Status: The permittee has active permits for all sources that require permits.

SMAQMD Rule 202 - New Source Review

SIP Approved: 06-19-1985 (50 FR 25417)

11-20-1984 rule version is SIP approved

02-24-2005 rule version is the current version and is not SIP approved

Rule Description: This rule sets the procedures for review of new and modified stationary

sources and provides the mechanisms for evaluating the applicability of

BACT and/or offset requirements.

Compliance Status: The facility's equipment has been reviewed pursuant to this rule. BACT

and/or emission offsets have been provided as required by the rule.

SMAQMD Rule 207 - Title V Federal Operating Permits

SIP Approved: 11-21-2003 (68 FR 65637) (part of Title V program approval)

04-26-2001 rule version is SIP approved

Rule Description: This rule sets forth the procedures for review, issuance and renewal of

Title V operating permits.

Permit No. TV2010-16-01

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Facility-wide Requirements

<u>Compliance Status:</u> The permittee has submitted a timely and complete Title V permit renewal

application. The expiration date of the current Title V Operating Permit is therefore extended to the time that the SMAQMD makes a decision

regarding approving the renewal of the Title V Operating Permit.

SMAQMD Rule 301 - Permit Fees - Stationary Source

SIP approved: Not SIP approved.

Rule Adopted: 10-27-2005

08-01-08 (Latest Revision)

Rule Description: This rule requires the facility to pay fees associated with the issuance and

renewal of SMAQMD Rule 201 permits and U.S. EPA Title V permits. Only Section 313 and the Title V references in Section 314 are

federally enforceable.

<u>Compliance Status:</u> The permittee has paid permit fees as required and is in compliance.

SMAQMD Rule 401 - Ringelmann Chart

SIP Approved: 02-01-1984 (49 FR 3987)

04-19-1983 rule version is SIP approved

Rule Description: This rule limits the discharge of air contaminants into the atmosphere

through visible emissions and opacity limitations.

<u>Compliance Status:</u> All equipment is expected to comply with the visible emission requirement.

SMAQMD Rule 403 - Fugitive Dust

<u>SIP Approved:</u> 12-05-1984 (49 FR 47490)

08-03-1977 rule version is SIP approved

Rule Description: This rule regulates operations which may cause fugitive dust emissions

into the atmosphere.

<u>Compliance Status:</u> The facility complies with this rule by taking the necessary precautions to

ensure that fugitive dust is not airborne beyond the property line.

SMAQMD Rule 404 – Particulate Matter

SIP Approved: 07-13-1987 (52 FR 26148)

11-20-1984 rule version is SIP approved

Rule Description: This rule limits the quantity of particulate matter emitted into the

atmosphere through an emission concentration limit.

Compliance Status: The facility complies with this rule by not emitting particulate matter in

excess of 0.1 grains per dry standard cubic foot.

SMAQMD Rule 406 – Specific Contaminants

SIP Approved: 12-05-1984 (49 FR 47490)

12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion

contaminants by limiting emission concentrations of SO₂ and particulate

matter (PM).

Compliance Status: The facility complies with this rule by not emitting sulfur compounds in

excess of 0.2% by volume and combustion contaminants in excess of 0.1

grains per dry standard cubic foot.

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP Approved: 12-05-1984 (49 FR 47490)

12-06-1978 rule version is SIP approved

Rule Description: This rule limits the emission of sulfur compounds from the combustion of

fuels.

Compliance Status: The facility complies with this rule by limiting sulfur content to no more than

50 grains per 100 cubic feet of gaseous fuel and 0.5% by weight of sulfur

for liquid or solid fuels.

SMAQMD Rule 442 - Architectural Coatings

<u>SIP Approved:</u> 11-09-1998 (63 FR 60214)

09-05-1995 rule version is SIP approved

05-24-2001 rule version is the current version and is not SIP approved

Rule Description: This rule limits the quantity of volatile organic compounds in architectural

coatings supplied, sold, offered for sale, applied, solicited for application or

manufactured for use within the District.

Compliance Status: The affected coatings used by the permittee are received and stored in

containers that display the required manufacturer's labels and demonstrate

compliance with the rule's requirements.

SMAQMD Rule 466 – Solvent Cleaning

SIP Approved: 05-05-2010 (75 FR 24406)

05-23-2002 rule version is SIP approved

10-28-2010 rule version is the current version and is not SIP approved

Rule Description: This rule limits emissions of volatile organic compounds from solvent

cleaning activities and from the storage and disposal of new and spent

cleaning solvents.

<u>Compliance Status:</u> The affected architectural coating application equipment solvent cleaning

materials used by the facility are received and stored in containers that display the required manufacturer's labels and demonstrate compliance

with the rule's requirements.

Although the 10-28-2010 rule version has not been SIP approved, this rule requires more stringent VOC content limits on solvent cleaning materials than the previous rule version and has already been submitted for, and is expected to receive, SIP approval. Therefore, pursuant to U.S. EPA's White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, the most stringent requirements are the permit conditions based on SMAQMD Rule No. 466 rule version 10-28-201, which

will be included in the Title V permit.

40 CFR 68 (begin at 68.1) - Chemical Accident Prevention Provisions

Promulgated: 01-31-1994 (59 FR 4493)

[04-09-2004 (69 FR 18831) most recent amendment]

Rule Description: This regulation specifies requirements for owners or operators of stationary

sources concerning the prevention of accidental chemical releases.

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of 40 CFR Part 68. 40 CFR 68.215 requires that the air permitting authority include in the Title V permit for a facility specified statements regarding the regulation. Those statements are included in the Federally Enforceable Requirements -

General section of the permit.

<u>Compliance Status:</u> The permittee does not store regulated substances in quantities exceeding

the thresholds specified in 40 CFR 68 and is in compliance with the

requirements of the regulation.

<u>40 CFR 82 Subpart F (begin at 82.150) - Protection of Stratospheric Ozone - Recycling and Emissions Reduction</u>

<u>Promulgated:</u> 05-14-1993 (58 FR 28712)

[04-13-2005 (70 FR 19278) most recent amendment]

Rule Description: The purp

The purpose of this subpart is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

This subpart applies to any person servicing, maintaining or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants for sale and persons purchasing class I or class II refrigerants.

As indicated in 40 CFR 70.6, Title V permits need to assure compliance with all applicable requirements at the time of permit issuance. Part 70 defines as an applicable requirement, "Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the Administrator has determined that such requirements need not be contained in a Title V permit." [40 CFR 70.2(12)]. The applicable requirements of Title VI are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status:

The permittee employs qualified contractors to maintain equipment that contains class I or class II refrigerants; maintains records for appliances requiring 50 lb of refrigerant or greater, and makes reports to the U.S. EPA as required.

SMAQMD Rule 201 Permits to Operate Nos. 17549, 10909, and 10910

Condition Description: The conditions on the SMAQMD Rule 201 Permit to Operate for the gas turbine, cooling towers, NOx SCR air pollution control device, and the CO catalyst air pollution control device limit emission concentrations, limit mass emissions and require recordkeeping and reporting.

> The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
Gas turbine, cooling towers, and air pollution control equipment.	P/O Nos. 17549, 10909, & 10910.	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)

The permittee's equipment complies with the SMAQMD Rule 201 permit Compliance Status:

conditions.

SMAQMD Rule No. 404 - Particulate Matter

SIP approved: 07-13-1987 (52 FR 26148)

[11-20-1984 amended version]

Rule Description: This rule regulates emissions of particulate matter by limiting the emission

concentration of particulate matter (PM).

Compliance Status: This rule limits particulate matter (PM) from non-combustion sources and

food processing facilities. The following table illustrates compliance with

the rule for the cooling towers.

The permittee's equipment complies with this rule.

DM/110

I IVI I O		
Equipment	SMAQMD Rule 404 Allowable Particulate Matter (PM) Emissions (grains/dscf)	Expected Particulate Matter (PM) Emissions from Cooling Towers (grains/dscf)
Gas Turbine with Associated Cooling Tower	0.1	0.00001 (A)

(A) In the following calculation, all particulate emissions from the cooling tower are assumed to be PM. Assumptions for calculations:

Total Rated Flow Rate for All Cooling Towers = 27,000 gallons/minute

Maximum Drift Rate = 0.0005% (permit limit)

Maximum Total Dissolved Solids = 4000 ppmw (permit ;imit)

Water Density = 8.4 lb/gallon

Total Air Flow Rate = 2,816,500 cfm (from 4 towers)

Total Dissolved Solids = 2850 ppmw

= <u>27,000 gallons</u> x 0.000005 x <u>2850 lb PM</u> x <u>8.34 lb</u> x <u>60 minutes</u> minute 1,000,000 lb water gallon hour

= 0. 1925 lb PM/hour

= <u>0.1925 lb PM</u> x <u>minute</u> x <u>1 hour</u> x <u>7000 grains</u> hour 2,816,500 cf 60 minutes 1 lb

= 0. 000008 grains/cf

(See discussion of streamlining of multiple applicable requirements at the end of this section.)

SMAQMD Rule 406 - Specific Contaminants

<u>SIP Approved:</u> 12-05-1984 (49 FR 47490)

12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion

contaminants by limiting emission concentrations of SO₂ and particulate

matter (PM).

Compliance Status: The following tables illustrate (a) the SMAQMD Rule 406 emission limits for

sulfur compounds (measured as SO₂) and combustion contaminants (measured as PM) and (2) the expected emissions from the equipment at

the facility.

The permittee's equipment complies with this rule.

SO₂ Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Sulfur Compounds Emissions (% SO ₂ by volume)	Expected Sulfur Compounds Emissions From Facility Equipment (% SO ₂ by volume)
Gas Turbine	0.2	0.000013 (A)

⁽A) The following calculation converts sulfur compounds in the natural gas combusted in the turbine from units of lb/MMBTU to percent:

Permit No. TV2010-16-01

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Gas Turbine with Associated Cooling Towers

Assumptions for calculations:

Natural gas fuel F-factor = 8710 dscf/MMBTU (at 0% O2, by definition of F factor)

Molecular weight of SO2 = 64 grams/gram mole

Standard molar volume = 385.3 dscf/lb mole (at 68 degrees F and 1 atm)

SO2 emission factor for natural gas = 0.0006 lb SO2/MMBTU

Outlet oxygen = 14.4% (from 11-2-10 source test)

= <u>0.0006 lb SO2</u> x <u>1 MMBTU @ 0% O2</u> x <u>385.3 cf/mole</u> MMBTU 8710 dscf 64 lb/lb mole

= 0. 414 ppmv at 0% O2

= 0. 129 ppmv at 14.4% O2

= 0.0000129% SO2 by volume

Particulate Matter Emission Concentration

a diodiate matter Emiceren Contentiation				
Equipment	SMAQMD Rule 406 Allowable Combustion Contaminants (PM) Emissions (grains/dscf at 12% CO2)	Expected Combustion Contaminants (PM) Emissions from Equipment		
Equipment		(grains/dscf at 3.751% CO ₂)	(grains/dscf at 12% CO ₂)	
Gas Turbine	0.1	0.00084 (A)	0.00044	

⁽A) Value is from November 2, 2010 source test.

SMAQMD Rule 413 - Stationary Gas Turbines

SIP Approved: 01-10-2008 (73 FR 1819)

03-24-2005 rule version is SIP approved

Rule Description: This rule limits emission concentrations of NOx emissions from stationary

gas turbines with a heat input of 3 MMBTU/hour or greater and operated

on gaseous and/or liquid fuel.

<u>Compliance Status:</u> The gas turbine is required to meet a BARCT NOx emission concentration

limit of 9 ppmvd at 15% oxygen. The NOx emission concentration limit in the Title V permit is 5 ppmvd at 15% oxygen which is stricter than the 9

ppmvd NOx emission limitation of SMAQMD Rule 413.

The gas turbine complies with the requirements of the rule.

SMAQMD Rule 420 - Sulfur Content of Fuels

<u>SIP Approved:</u> 12-05-1984 (49 FR 47490)

08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from the combustion of

fuels by limiting the sulfur content of the fuel.

Compliance Status: The rule limits the sulfur content of gaseous fuels to less than 50 grains per

100 cubic feet and for liquid fuels less than 0.5 percent by weight.

The commercial natural gas supplied to the permittee has a sulfur content of 0.22 grains per 100 cubic feet. Therefore, the equipment complies with

this rule.

40 CFR 60 Subpart GG (begin at 60.330) - NSPS for Stationary Gas Turbines

<u>Promulgated:</u> 09-10-1979 (44 FR 52798)

[02-24-2006 (71 FR 9457) most recent amendment]

Rule Description: The NSPS affects stationary gas turbines with maximum design heat input

equal to or greater than 10 MMBTU/hour. The NSPS limits the emission concentration of nitrogen oxides to no greater than 75 ppmv at 15% O₂. The NSPS limits the sulfur content of the fuel to no greater than 0.8% by

weight.

On July 08, 2004 the NSPS was amended to allow a NOx CEMS in lieu of a water-to-fuel ratio monitor. In the initial Title V permit process, the SMAQMD had determined that the NOx CEMS installed at the permittee's facility was equivalent to monitoring water-to-fuel ratio and did not require a water-to-fuel ratio monitor. The CEMS requirement in the Title V permit will remain in place and a monitoring equivalency determination by the SMAQMD is no longer required.

The NSPS requires that the sulfur content of the gas turbine natural gas fuel be monitored on a daily basis unless the sulfur content is less than 20 grains/100 cubic feet. The natural gas fuel used by the UCDMC gas turbine is commercial pipeline natural gas with a sulfur content of 0.22 grains/100 cubic feet. Therefore, there will be no requirement to monitor sulfur content on a daily basis.

<u>Compliance Status:</u> The NOx emission concentration from the turbine exhaust complies with

the NSPS requirement. The sulfur content of the natural gas fuel complies

with the NSPS requirement.

Sacramento Metropolitan Air Quality Management District

Streamlining Multiple Applicable Requirements:

The turbine is regulated by the NSPS, SIP approved rules and NSR permit conditions. The respective requirements are:

Basis of Requirement	Applicable Requirements NOx
40 CFR 60 Subpart GG – NSPS for Stationary Gas Turbine	≤ 75 ppmv at 15% O ₂
SMAQMD Rule No. 413 – Stationary Gas Turbines	≤ 9 ppmv at 15% O ₂
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	≤ 5 ppmv at 15% O ₂

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

Basis of Requirement	Applicable Requirements SO2
40 CFR Subpart GG NSPS for Stationary Gas Turbine	Total sulfur content of the fuel shall be ≤ 0.8% by weight (8000 ppmw) (equivalent to 0.71 lb SO ₂ /MMBTU) (A)
SMAQMD Rule No. 406 - Combustion Contaminants	Sulfur compounds shall be ≤ 0.2% by volume, measured as SO ₂ (equivalent to 32.9 lb SO ₂ /MMBTU) (B)
SMAQMD Rule No. 420 - Sulfur Content of Fuels	Gaseous fuel shall contain ≤ 50 grains of sulfur compounds per 100 cf, measured as H ₂ S. (C)

Basis of Requirement	Applicable Requirements SO ₂
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	The gas turbine shall only use natural gas as fuel. Typical natural gas fuel has a sulfur compound content of less than 0.0006 lb/MMBTU. Therefore, sulfur emissions from the fuel shall be < 0.0006 lb/MMBTU

(A) The calculation for determining the equivalent lb SO2/MMBTU based on the fuel's sulfur content by weight is:

 $\frac{\text{lb SO2}}{\text{MMBTU}} = \frac{(0.008 \text{ lb S/lb nat. gas}) \times (0.0446 \text{ lb nat. gas/cf nat. gas}) \times (2 \text{ lb SO2/lb S})}{(1 \text{ MMBTU/1000 cf nat. gas})} = 0.71 \text{ lb SO2/MMBTU}$

(B) The calculation for determining the equivalent lb SO2/MMBTU based on 0.2% SO2 by volume in the exhaust gas is:

76.135 MMBTU/hour is used in the calculation below because the 2010 source test data that provided the exhaust airflow rate is based on the gas turbine operating at that heat input.

<u>lb SO2</u> = (0.002 parts SO2/1 part exhaust)x(125,666 ft3 exhaust/min)x(60 min/hr)x (1 lb mol/385 ft3)x(64 lb SO2/ mol) MMBTU

76.110 MMBTU/hour

- = <u>2507 lb SO2/hour</u> 76.110 MMBTU/hour
- = 32.9 lb SO₂/MMBTU
- (C) The calculation for determining the equivalent lb SO2/MMBTU based on the fuel's sulfur content by weight is:

= 0.1270 lb SO2/MMBTU

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202.

Basis of Requirement	Applicable Requirements PM
SMAQMD Rule No. 406 - Combustion Contaminants	≤ 0.1 grains/dscf, corrected to 12% CO ₂

Basis of Requirement	Applicable Requirements PM
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	Gas turbine shall emit ≤ 2.8 lb PM10/hour (equivalent to ~ 0.00012 grains/dscf corrected to 12% CO ₂)

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

The cooling towers are regulated by SIP approved rules and NSR permit conditions. The respective requirements are:

Basis of Requirement	Applicable Requirements PM
SMAQMD Rule No. 404 – Particulate Matter	≤ 0.1 grains/dscf
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	Cooling towers shall have a drift rate ≤ 0.0005% and total dissolved solids in the cooling water ≤ 2850 ppmw. (equivalent to ~ 0.00001 grains/dscf.

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart D (begin at 60.40) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After August 17, 1971:

<u>Promulgated:</u> 06-14-1974 (39 FR 20791)

[06-13-2007 (72 FR 32717) most recent amendment]

Rule Description: This federal regulation applies to any fossil fuel fired steam generating unit

with a heat input greater than 250 MMBTU. It limits PM emissions to 0.1 lb/MMBTU, NOx to 0.20 lb/MMBTU and opacity to 20% except for one six

minute period per hour of not more than 27% opacity.

Compliance Status: The gas turbine is not subject to this rule because it is not a fossil fuel fired

steam generating unit as defined in 40 CFR 60.41(a).

"Fossil-fuel fired steam generating unit means a furnace or boiler used in the process of burning fossil fuel for the purpose

of producing steam by heat transfer."

Each gas turbine is not a "furnace or boiler" and is therefore **not subject** to

the rule.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 60 Subpart Da (begin at 60.40a) - NSPS for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978:</u>

Promulgated: 06-11-1979 (44 FR 33613)

[06-13-2007 (72 FR 32717) most recent amendment]

Rule Description: This federal regulation applies to any steam electric generating unit

capable of combusting 250 MMBTU/hour of fossil fuel and supplying more than 1/3 of its potential output capacity and more than 25 MW electrical output to any utility power distribution system for sale. It limits PM emissions to 0.03 lb/MMBTU, NOx to 0.20 lb/MMBTU and opacity to 20% (6-minute average) except for one six minute period per hour of not more

than 27% opacity.

Compliance Status: The gas turbine is not subject to this rule because it is not a steam

generating unit as defined in 40 CFR 60.41Da.

"Steam generating unit means any furnace, boiler, or other device used for combusting fuel for the purpose of producing steam (including fossil-fuel-fired steam generators associated with combined cycle gas turbines; nuclear steam generators

are not included)".

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 60 Subpart Db (begin at 60.40b) - NSPS for Industrial - Commercial - Institutional</u> Steam Generating Units:

<u>Promulgated:</u> 11-25-1986 (51 FR 42768)

[06-13-2007 (72 FR 32742) most recent amendment]

Rule Description: This federal regulation applies to any steam generating unit capable of

combusting greater than 100 MMBTU/hour of fuels. The regulation limits

NOx, PM, SO₂ and opacity emissions.

Compliance Status: The gas turbine is not subject to this rule because it is not a "steam

generating unit" as defined in 40 CFR 60.41b.

"Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process

heaters as they are defined in this subpart."

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 60 Subpart Dc (begin at 60.40c) - NSPS for Small Industrial - Commercial - Institutional Steam Generating Units:</u>

Promulgated: 09-12-1990 (55 FR 37683)

[01-28-2009 (74 FR 5090) most recent amendment]

Rule Description: This federal regulation applies to any steam generating unit capable of

combusting between 10 and 100 MMBTU/hour of fuels. The regulation

limits PM, SO₂ and opacity emissions.

Compliance Status: The gas turbine is not subject to this rule because it is not a "steam

generating unit" as defined in 40 CFR 60.41c.

"Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart."

Permit No. TV2010-16-01

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Gas Turbine with Associated Cooling Towers

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart KKKK (begin at 60.4300) - Standards of Performance for Stationary Combustion Turbines:

<u>Promulgated:</u> 07-06-2006 (71 FR 38497)

[04-20-2009 (74 FR 11861) most recent amendment]

Rule Description: This NSPS establishes emission standards for the control of NOx and SO2

emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Compliance Status: The gas turbine is not subject to this NSPS since it was not constructed

or modified after February 18, 2005.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers:</u>

Promulgated: 09-08-1994 (59 FR 46339)

Rule Description: This federal regulation prohibited the use of chromium in cooling tower

water, at major sources of HAP, beginning September 08, 1994.

Compliance Status: Each cooling tower is not subject to the federal NESHAP for Industrial

Process Cooling Towers because it is not located at a facility that is a

major source for HAP.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 63 Subpart YYYY (begin at 63.6080) - National Emission Standards for Hazardous Air Pollutants for Stationary Gas Turbines</u>:

<u>Promulgated:</u> 03-05-2004 (69 FR 10511)

04-20-2006 (71 FR 20467) most recent amendment

Rule Description: This federal regulation limits the emission of HAP from stationary gas

turbines located at major sources of HAP.

Compliance Status: The gas turbine is not subject to the federal NESHAP for Stationary Gas

Turbines because it is not located at a facility that is a major source for

HAP.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 64 (begin at 64.1) Compliance Assurance Monitoring:

<u>Promulgated:</u> 10-22-1997 (52 FR 54940)

Rule Description: This federal regulation specifies monitoring requirements for Title V

sources that will assure compliance with emission limitations or standards.

Compliance Status: ROC, SO2, and PM10

Applicability of the Compliance Assurance Monitoring regulation requires

that:

"The unit uses a control device to achieve compliance with

any such emission limitation or standard"

[40 CFR 64.2(a)(2)]

The gas turbine does not use a control device for compliance with ROC, SO₂, and PM10 emissions limits and is therefore not subject to 40 CFR Part 64 Compliance Assurance Monitoring for ROC and PM10.

NOx and CO

This federal regulation exempts pollutant specific emissions units that are regulated by:

"Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1"

[40 CFR 64.2(b)(1)(vi)]

Since the gas turbine is subject to a continuous emission monitoring requirement for CO and NOx in the Title V permit, it is exempt from 40 CFR Part 64 Compliance Assurance Monitoring for CO and NOx.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS **Equipment Specific Requirements (continued) Boilers**

SMAQMD Rule 201 Permits to Operate Nos. 12979, 20216, 20217, 20218, 20219.

Condition Description: The conditions on the SMAQMD Rule 201 Permits to Operate 20216 to 20219 for the boilers limit emission concentrations, hours of operation when back-up fuel is used, and require recordkeeping. The conditions on SMAQMD Rule 201 Permit to Operate 12979 limits the type of fuel combusted in the boilers

> The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable, federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
Boilers	P/O Nos. 20216, 20217, 20218, 20219	Condition Nos. 1, 2, 3 and 4. (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)
Boilers	P/O No. 12979	Condition Nos. 1, 2 and 3. (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)

Compliance Status: UCDMC is currently in compliance with all of the conditions on SMAQMD

Rule 201 Permits to Operate Nos. 12979, 20216, 20217, 20218, 20219.

SMAQMD Rule 406 - Specific Contaminants

12-05-1984 (49 FR 47490) SIP Approved:

12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion

contaminants by limiting emission concentrations of SO₂ and particulate

matter (PM).

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Boilers

Compliance Status:

The following tables illustrate (1) the SMAQMD Rule 406 emission limits for sulfur compounds (measured as SO₂) and combustion contaminants (measured as PM) and (2) the expected emissions from the boilers. Compliance was determined using diesel fuel as emergency fuel since diesel fuel provides for a highest concentration of both SO₂ and particulate matter (PM) than natural gas.

The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at the end of this section.)

SO₂ Emission Concentration

GOZ ETITIOSION CONCENTRATION						
Equipment	SMAQMD Rule 406 Allowable Sulfur Compounds Emissions (% SO ₂ by volume)	Expected Sulfur Compounds Emissions from Facility Equipment (% SO ₂ by volume)				
Boilers	0.2	0.0010 (A)				

⁽A) The following calculation converts sulfur compounds in the diesel fuel combusted in the boiler from units of lb/1000 gallon to percent by volume in the exhaust gas:

Assumptions for calculations:

Diesel fuel F-factor = 9190 dscf/MMBTU (at 0% O2, by definition of F factor)

Molecular weight of SO2 = 64 grams/gram mole

Standard molar volume = 385.3 dscf/lb mole (at 68 degrees F and 1 atm)

SO2 emission factor = 2.8 lb SO2/1000 gallons of diesel fuel

Outlet oxygen = 4.7% (from November 2010 source test)

=	2.8 lb SO ₂ x	1 gal fuel oil	Χ	<u>1 MMBTU @ 0% O</u> 2	Χ	385.3 cf/mole	Χ	1,000,000 BTU
	1000 gal	137,000 BTU		9190dscf		64 lb/lb mole		1 MMBTU

- = 13 ppmv at 0% O2
- = 10 ppmv at 4.7% O2
- = 0.0010% SO2 by volume

Particulate Matter Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Combustion Contaminants (PM) Emissions (grains/dscf at 12% CO ₂)	Expected Combustion Contaminants (PM) Emissions from Facility Equipment (grains/dscf at 12% CO ₂)
Boilers	0.1	0.008 (A)

⁽A) The following calculation is based on U.S. EPA AP-42, Table 1.3-1 and 1.3-2 when combusting Diesel No. 2:

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Boilers

F Factor = 9190 dscf/MMBTU (at 0% O2, by definition of F factor)

Diesel fuel heat content = 137,000 BTU/gal

PM Emission Factor = 3.3 lb PM/1000 gallon from AP-42

Assume 15.59% CO2 in exhaust gas based on F-Factor of 9190 dscf/mmBTU, diesel HHV of 19,300 Btu/lb, 87% carbon in the diesel fuel, and a carbon to CO2 conversion of 99%.

= <u>3.3 lb PM</u> x <u>1 gal fuel oil</u> x <u>1 MMBTU</u> x <u>7000 grains</u> x <u>1,000,000 BTU</u> 1000 gal 137,000 BTU 9190 dscf lb 1 MMBTU

= 0.0183 grains/dscf

= 0.0183 grains/dscf x <u>12%</u> 15.59% CO2 in exhaust gas

= 0.0141 grains/dscf at 12% CO2

SMAQMD Rule 411 – Boiler NOx

<u>SIP Approved:</u> 05-06-2009 (74 FR 20880)

08-23-2007 rule version is SIP approved

Rule Description: This rule limits emissions of NOx and CO from boilers with a heat input

rating of 1.0 MMBTU or greater.

Compliance Status: Rule 411, Section 301 limits the emission concentration of the four large

boilers for NOx to 9 ppm at 3% oxygen and the emissions of CO to 400 ppm at 3% oxygen when burning natural gas fuel. For Diesel No. 2 fuel,

the boilers are limited for NOx emissions to 150 ppm at 3% oxygen.

The applicant has requested a permit shield from SMAQMD Rule 411, Sections 302 and 403. The reason for the request is due to some ambiguity in the rule regarding the use of nongaseous fuel. To briefly summarize, Section 302 requires emission limits of 40 ppm NOx and 400 ppm CO₂ at 3% oxygen when firing with non-gaseous fuel. In addition, Section 403 requires periodic source testing for boilers governed by Section 302. Section 304, on the other hand, allows less stringent emission limits of 150 ppm NOx at 3% oxygen if the operator accepts an annual usage limit of 168 hours/year, excluding 48 hours/year for equipment and emissions testing. In addition, Section 403 doesn't require periodic testing for boilers governed by Section 304. While the intent of the rule is clear that compliance with Section 304 (fuel restriction with higher emission limits) precludes the necessity of compliance with Section 302 (unlimited use with lower emission limits), the rule doesn't contain such clarifying language. Therefore, since the boilers are governed by Section 304, a permit shield has been granted from Section 302 and, by extension, Section 403 provided that the boilers continue to comply with Section 304.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Boilers

The 8 small boilers are not regulated by this rule since each boiler has a fuel input rating of less than 1 MMBTU/hour

The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at the end of this section)

SMAQMD Rule 420 - Sulfur Content of Fuels

<u>SIP Approved:</u> 12-05-1984 (49 FR 47490)

08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from the combustion of

fuels by limiting the sulfur content of the fuel.

Compliance Status: The following table illustrates the SMAQMD Rule 420 sulfur limits for

gaseous and liquid fuels and the expected sulfur content of the gaseous

and liquid fuels combusted in the boilers.

The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at

the end of this section.)

Equipment	Fuel	SMAQMD Rule 420 Allowable Sulfur Content of Fuel	Expected Sulfur Content of Fuel Used
Boilers	Natural Gas	50 grains/100 cubic feet	0.22 grains/100 cubic feet
Boilers	Diesel No. 2	0.5% by weight	0.0015% by weight

<u>40 CFR 60 Subpart Dc (begin at 60.40c) - NSPS for Small Industrial - Commercial - Institutional Steam Generating Units:</u>

Promulgated: 09-12-1990 (55 FR 37683)

[01-28-2009 (74 FR 5090) most recent amendment]

Rule Description: This federal regulation affects steam generating units with a maximum heat

input rating of 10 to 100 MMBTU/hour. The NSPS limits the sulfur content of the distillate fuel oil to a maximum of 0.5% by weight and limits the opacity of the stack emission to a maximum of 20%. The NSPS also

requires recordkeeping and reporting.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Boilers

Compliance Status:

This rule is not applicable to the small boilers specified in SMAQMD Permit to Operate 12979 because the boilers are rated less than 10 MMBTU/hour. The remaining 4 large boilers are regulated by this rule.

For the 4 larger boilers, UCDMC has chosen to demonstrate compliance with the distillate fuel oil sulfur content by fuel oil supplier certification (40 CFR 60.44c(h)). The fuel oil supplier certification must contain the following (40 CFR 60.48c(f)):

- 1. Name of the oil supplier.
- Statement of the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. [Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as definied by the American Society for Testing and Materials in ASTM D396-78, "Standard Specifications for Fuel Oils."]
- 3. The sulfur content or the maximum sulfur content of the oil.

UCDMC must keep records of the fuel oil supplier certification and submit a report every six months that includes (40 CFR 60.48c(e)).

- 1. Calendar dates covered in the reporting period.
- 2. Records of fuel oil supplier certification.
- 3. Certified statement signed by the owner or operator of the affected facility that the records of fuel oil supplier certification submitted represent all of the fuel combusted during the reporting period.

Boilers No. 1, 2, 3, and 4 comply with the NSPS requirements. The requirements of this rule do not apply to the 8 small boilers.

Streamlining Multiple Applicable Requirements:

The 4 large boilers (Nos. 1, 2, 3, 4) are regulated by the NSPS, SIP approved rules, and NSR permit conditions. The respective requirements are:

Basis of Requirement	Applicable Requirements		
Dasis of Requirement	SO ₂	Opacity	
40 CFR 60 Subpart Dc – NSPS for Small Boilers	≤ 0.5% S by weight in liquid fuel	≤ 20% averaged over 6 minutes except for one 6 minute period per hour of not more than 27%.	

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Boilers

Pagin of Dogwinsment	Applicable Requirements		
Basis of Requirement	SO ₂	Opacity	
SMAQMD Rule No. 420 – Sulfur Content of Fuels	≤ 0.5% S by weight in liquid fuel	≤ 20% averaged over 15 seconds except for 3 total minutes per hour with no limit.	
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	≤ 0.02% S by weight in liquid fuel	≤ 20% averaged over 15 seconds except for 3 total minutes per hour with no maximum limit	

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

Pagin of Paguiroment	Applicable Requirements		
Basis of Requirement	NOx	СО	
SMAQMD Rule 411 – Boiler NOx (Emergency use diesel fuel)	150 ppmvd corrected to 3% O2	No Limit Specified	
SMAQMD Rule No. 201 permit conditions based on SMAQMD Rule No. 202 – New Source Review (diesel fuel)	40 ppmvd corrected to 3% O2	400 ppmvd corrected to 3% O2	

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

40 CFR 60 Subpart Dc (60.47c) - Emission Monitoring for Particulate Matter:

This part of the rule requires a CEMS only for those facilities that combust coal, wood, or residual oil. There is no CEMS requirements for a facility that combusts only distillate oil. Because UCDMC's boilers only combust natural gas and distillate oil, there is no NSPS requirement for a CEMS.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements (continued)
Boilers

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record:

<u>40 CFR 60 Subpart Dc (60.45c) – Compliance and Performance Test Methods and Procedures</u> for Particulate Matter:

This part of the rule requires an initial opacity test and then subsequent opacity tests as requested by the Administrator. Because UCDMC's boilers only combust distillate oil as an emergency use fuel and because the NSPS does not require specific periodic monitoring for a facility that combusts only distillate oil, there will be no specific requirement to periodically monitor opacity.

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) IC Engines – Emergency Use

SMAQMD Rule 201 Permits to Operate Nos. 18533, 18534, 18535, 18536, 14475, 10707, 11494, 13421, 19775, 22060, 22314.

Condition Description: The conditions on the SMAQMD Rule 201 Permits to Operate for the emergency IC engines limit emission concentrations, limit hours of operation and mass emissions, and require recordkeeping.

The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
IC Engines – Emergency Use	P/O No. 10707	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)
IC Engines – Emergency Use	P/O No. 11494 and 13421	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)
IC Engines – Emergency Use	P/O No. 14475	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation.) Condition Nos. 11, 12, and 14 (These are nuisance requirements not contained in any SIP approved rule or other federally enforceable regulation.) All other permit conditions are federally enforceable.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
IC Engines – Emergency Use	P/O Nos. 18533, 18534, 18535, 18536,	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation.) Condition No. 12 (This is a nuisance requirement and is not contained in any SIP approved rule or other federally enforceable regulation.) All other permit conditions are federally enforceable.
IC Engines – Emergency Use	P/O No. 19775	Condition Nos. 1, 2, 3, and 4 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation.) Condition No. 11 (This is a nuisance requirement which is not contained in any SIP approved rule or other federally enforceable regulation.) All other permit conditions are federally enforceable.
IC Engines – Emergency Use	P/O No. 22060	Condition Nos. 1, 2, 3, and 4 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)
I C Engine – Emergency Use	P/O No. 22314	Condition Nos. 1, 2, 3, 4, and 5 (These are administrative requirements not contained in any SIP approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.)

Compliance Status: UCDMC is currently in compliance with all of the conditions on SMAQMD

Rule 201 Permits to Operate Nos. 18533, 18534, 18535, 18536, 14475,

10707, 11494, 13421, 19775, 22060, 22314.

SMAQMD Rule 406 - Specific Contaminants

<u>SIP Approved:</u> 12-05-1984 (49 FR 47490)

12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion

contaminants by limiting emission concentrations of SO2 and particulate

matter (PM).

Compliance Status: The following tables illustrate (1) the SMAQMD Rule 406 emission limits for

sulfur compounds (measured as SO₂) and combustion contaminants (measured as PM) and (2) the expected emissions from the equipment at

the facility.

The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at the end of this section titled "Equipment Specific Requirements - IC

Engine, Emergency Use)

SO₂ Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Sulfur Compounds Emissions (% by volume as SO ₂)	Expected Sulfur Compounds Emissions from Facility Equipment (ppmv as SO2)
IC engine, emergency use	0.2	0.000030 (A)

⁽A) Calculation of SO2 emission concentration from IC engines:

Assumptions for calculations:

Diesel fuel F-factor = 9,190 dscf/MMBTU (at 0% O2, by definition of F factor)

Molecular weight of SO2 = 64 grams/gram mole

Standard molar volume = 0.8493 dscf/gram mole (at 68 degrees F and 1 atm)

SO2 emission factor = 0.0049 grams/hp-hr

IC engine heat rate = 2542.5 BTU/hp-hr at 100% engine efficiency

IC engine efficiency = 30% (assumed)

Outlet oxygen = 13.5% (typical for diesel IC engine)
Outlet carbon dioxide = 6% (typical for diesel IC engine)

SO2 emissions from the IC engine are calculated by dividing the Volumetric SO2 Emission Rate by the Volumetric Combustion Gas Emission Rate as shown below. The emission factor of 0.0049 g/hp-hr is based on US EPA AP-42 Table 3.3-1 (10/96) which is the sulfur content of ultra low sulfur diesel. Ultra low sulfur diesel (a.k.a. CARB Diesel or equivalent) is required by the California Air Toxic Control Measure for Stationary Compression Ignition Engines.

Volumetric SO₂ Emission Rate:

- = (0.0049 g/hp-hr) (0.8493 dscf/gram mole) (1 gram mole/64 grams)
- = 0.000065 dscf SO2/hp-hr

Volumetric Combustion Gas Emission Rate:

- = (9190 dscf/MMBTU) (2542.5 BTU/hp hr) (100%/30% engine efficiency)
- = 78 dscf of combustion gas/hp-hr at 0% O2, by definition of F factor
- = 220 dscf of combustion gas/hp-hr at 13.5% O2 <---- correction to 13.5% O2 for typical actual conditions

% SO2 by volume:

- = (0.000065 dscf SO2/hp-hr) (100%)
 - 220 dscf/hp-hr
- = 0.000030% SO2 by volume

Particulate Matter Emission Concentration

Equipment	SMAQMD Rule 406 Allowable Combustion Contaminants (PM) Emissions (grains/dscf at 12% CO ₂)	Expected Combustion Contaminants (PM) Emissions from Facility Equipment (grains/dscf at 12% CO ₂)
IC engine, emergency use	0.1	0.1 (A)

- (A) Calculation of particulate matter concentration from the UCDMC IC engine with the highest particulate concentration.
 - = PM10 emission rate (grains/hour) Exhaust volume rate (dscf/hour)
 - (1.0 gram/hp-hr) (15.43 grains/gram) (136 hp)
 (136 hp) (2542.5 BTU/hp-hr) (100%/30% engine efficiency) (9190 dscf/MMBTU)
 - = <u>2098 grains/hour</u> 10,592 dscf/hour
 - = 0.20 grains/dscf at 0% O2, by definition of F factor
 - = 0.07 grains/dscf at 13.5% O2 <---- correction to 13.5% O2 for typical actual conditions
 - = 0.14 grains/dscf at 12% CO2 <--- correction to 12% CO2 as required by SMAQMD Rule 406 {correction factor = 12/6}

The PM emission concentration limit is regulated by SMAQMD Rule 406 to only one decimal place; therefore, the PM emission can be as high as 0.149 grains/dscf and still be in compliance with the rule.

SMAQMD Rule 412 - Stationary IC Engines Located at Major Stationary Sources of NOx

SIP Approved: 04-30-1996 (61 FR 18959)

06-01-1995 rule version is SIP approved

Rule Description: This rule regulates NOx, CO and ROC emissions from the operation of

stationary IC engines located at major stationary sources of NOx. However, emergency use IC engines are only required to install a non-resetting totalizing hour meter (or computerized tracking) and maintain

operation records.

<u>Compliance Status:</u> The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at the end of this section titled "Equipment Specific Requirements - IC

Engine, Emergency Use)

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP Approved: 12-05-1984 (49 FR 47490)

08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from the combustion of

fuels by limiting the sulfur content of the fuel.

Compliance Status: The following table illustrates the SMAQMD Rule 420 sulfur limits for

gaseous and liquid fuels and the expected sulfur content of the gaseous

and liquid fuels combusted in equipment at the facility.

The permittee's equipment complies with this rule.

(Refer to discussion of streamlining of multiple applicable requirements at the end of this section titled "Equipment Specific Requirements - IC

Engine, Emergency Use)

Equipment	Fuel	SMAQMD Rule 420 Allowable Sulfur Content of Fuel (% S by weight)	Expected Sulfur Content of Fuel Used (% S by weight)
IC engine, emergency use	CARB diesel	0.5	0.0015

<u>40 CFR 60 Subpart IIII (begin at 60.4200) – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:</u>

<u>Promulgated:</u> 07-11-2006 (69 FR 33473)

Rule Description: This federal regulation limits the emissions from new Reciprocating Internal

Combustion Engines (RICE.)

Compliance Status:

The IC engines specified in SMAQMD Permits to Operate Nos. 19775 and 22060 are subject to this rule because they commenced construction after July 11, 2005 where the engine is manufactured after April 1, 2006 for a non fire pump engine or were manufactured after July 1, 2006 for engines manufactured as a certified National Fire Protection Association (NFPA) fire pump engine.

The emergency IC engines specified in the preceding paragraph comply with the NSPS by meeting or exceeding the emission requirements specified in the NSPS.

The emergency use IC engines specified in SMAQMD Permits to Operate 18533, 18534, 18535, 18536, 14475, 10707, 11494, 13421, and 22314 <u>are not subject</u> to the federal NSPS because they were constructed or modified before the dates mentioned in the preceding paragraph.

40 CFR 63 Subpart ZZZZ (begin at 63.6580) - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE):

<u>Promulgated:</u> 06-15-2004 (69 FR 33473)

Rule Description: This federal regulation limits the emission of HAPs from new Reciprocating

Internal Combustion Engines (RICE) and major and area sources.

<u>Compliance Status:</u> The emergency IC engines specified in SMAQMD Permits to Operate Nos.

19775 and 22060 are subject to this rule because they commenced construction after June 11, 2006. They comply with the NESHAP by emitting at or below the levels specified in 40 CFR 60 Subpart IIII.

The emergency use IC engines specified in SMAQMD Permits to Operate 18533, 18534, 18535, 18536, 14475, 10707, 11494, 13421, and 22314 <u>are not subject</u> to the federal NESHAP for Reciprocating Internal Combustion Engines because they are institutional emergency engines at an area source for HAP that were constructed or reconstructed before June 11, 2006 (40 CFR 63.6590(b)(3)).

Streamlining Multiple Applicable Requirements:

A. IC Engine, Emergency Use

Basis of Requirement	Applicable Requirements	
SMAQMD Rule No. 406 – Specific Contaminants	≤ 0.1 grains PM/dscf at12% CO ₂ and ≤ 2000 ppmv sulfur compounds as SO ₂	

Basis of Requirement	Applicable Requirements
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	≤ 0.13 lb PM/hour (equivalent to 0.1 grains/dscf at 12% CO ₂) and ≤ 0.0015 ppmw S in the fuel (equivalent to 0.00003 ppmv as SO ₂)

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

Basis of Requirement	Applicable Requirements % S by weight
SMAQMD Rule No. 420 – Sulfur Content of Fuels	≤ 0.5%
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	≤ 0.0015%

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

Basis of Requirement	Applicable Requirements
SMAQMD Rule No. 412 – Stationary IC Engines Located at Major Stationary Sources of NOx	Operate a non-resetting totalizing hour meter (or computerized tracking) and maintain operation records.
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	Operate a non-resetting totalizing hour meter (or computerized tracking) and maintain operation records.

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The permit conditions based on SMAQMD Rule Nos. 201 and 202 are as stringent as the SMAQMD Rule 412 requirements and will be included in the Title V permit.

Permit No. TV2010-16-01

I. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Equipment Specific Requirements (continued) Gasoline Dispensing Facility

SMAQMD Rule 201 Permit to Operate No. 21510

SMAQMD Permit to Operate No. 21510:

Condition Description: The conditions on the SMAQMD Rule 201 Permit to Operate for the

gasoline dispensing facility limit gasoline throughput, gasoline

emisisons, and require recordkeeping.

The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
Gasoline Dispensing Facility	P/O No. 21510	Condition Nos. 1, 2, 3, and 4.

Compliance Status: UCDMC is currently in compliance with all of the conditions on

SMAQMD Rule 201 Permit to Operate No. 21510.

SMAQMD Rule 448 – Gasoline Transfer into Stationary Storage Containers

SIP Approved: 01-23-1996 (61 FR 1716)

02-02-1995 rule version is SIP approved 02-26-2009 rule version is not SIP approved

Rule Description: This rule limits emissions resulting from the transfer of gasoline into any

stationary storage container or delivery vessel, or from the pump-out of gasoline from any stationary storage container, delivery vessel, or vehicle

fuel tank.

Compliance Status: The gasoline dispensing facility is in compliance with all the applicable

requirements of this rule

SMAQMD Rule 449 – Transfer of Gasoline into Vehicle Fuel Tanks

<u>SIP Approved:</u> 03-24-2003 (68 FR 14156)

09-26-2002 rule version is SIP approved 02-26-2009 rule version is not SIP approved

Rule Description: This rule limits the emissions of gasoline vapors into the atmosphere when

motor vehicle fuel tanks are filled.

Compliance Status: The gasoline dispensing facility is in compliance with all the applicable

requirements of this rule

J. <u>NON-FEDERALLY ENFORCEABLE REQUIREMENTS</u> Facility-wide Requirements

SMAQMD Rule 306 - Air Toxic Fees

SIP approved: Not SIP approved.

Rule Adopted: 03-27-2003

Rule Description: This rule requires the facility to pay fees associated with toxic emissions

regulated through the California "Toxic Hotspot" Program.

Compliance Status: The permittee has paid toxic fees as required and is in compliance.

SMAQMD Rule 602 - Breakdown Conditions: Emergency Variance

SIP approved: Not SIP approved.

Rule Adopted: 12-06-1978

Rule Description: This rule requires the facility to notify the SMAQMD of any equipment

breakdowns that cause an emission violation and to follow specific

procedures.

Compliance Status: The permittee has complied with the requirements of the rule when

equipment breakdowns have caused emission violations.

<u>Code of California Regulations, Titles 17, Division 3, Chapter 1, Subchapter 7.5, Section 93103, Air Toxic Control Measure (ATCM) - Regulation for Chromate Treated Cooling Towers</u>

SIP approved: Not SIP approved.

Rule Adopted: 03-09-1989 (Adopted by the California Air Resources Board.)

Rule Description: This rule does not allow hexavalent chromium containing compounds to be

added to the cooling tower circulating water.

Compliance Status: The cooling tower does not use hexavalent chromium containing

compounds.

<u>State of California Air Toxic Control Measure – Stationary Compression Ignition Engines (CCR 93115)</u>

SIP approved: Not SIP approved.

Rule Description: This rule specifies emission limits, fuel limitations, and monitoring

requirements for diesel fueled engines over 50 hp.

<u>Compliance Status:</u> The IC engines comply with the requirements of this rule

K. Recommendation and Title V Permit Conditions

It is recommended that the University of California, permit be renewed.	Davis Medical Center Title V Federal Operating
See proposed Title V Federal Operating Permit TV	/2010-16-01 for permit conditions.
Approved by:	Date:

ATTACHMENT A

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title		e Rule an "Applicable Federally Enforceable uirement"?
•	•	101	General Provisions and Definitions 09-03-1998 version	Yes -	No related conditions are included in the permit because of general nature of the rule.
•	•	102	Circumvention 11-29-1983 version	Yes -	No related conditions are included in the permit because of general nature of the rule.
	•	103	Exceptions 11-29-1983 version	No -	Source does not operate the type of equipment described in this rule.
	•	104	General Conformity 11-03-1994 version	No -	The rule's purpose is to have the SMAQMD review federal conformity findings.
	•	105	Emission Statement 09-05-1996 version	No -	Actual facility emissions of ROC and NOx are less than 25 tons/year.
		107	Alternative Compliance	No -	It is not a SIP approved rule.
•		108	Minor Violations	No -	It is not a SIP approved rule.
•	•	201	General Permit Requirements 11-20-1984 version	Yes -	No related conditions are included in the permit because of the general nature of the rule.
•	•	202	New Source Review 11-20-1984 version	Yes -	Related conditions are included in the permit.

Rule is Applicable	Rule is SIP Approved	Rule No.		Is the Rule an "Applicable Federally Enforceable
Rul	Rul	Rul	Rule Title	Requirement"?
		203	Prevention of Significant Deterioration	No - It is not a SIP approved rule.
		204	Emission Reduction Credits	No - It is not a SIP approved rule.
		205	Community Bank and Priority Reserve Bank	No - It is not a SIP approved rule.
		206	Mobile and Transportation Source Emission Reduction Credits	No - It is not a SIP approved rule.
•	*	207	Title V Federal Operating Permit Program	Yes - Related conditions are included in the permit. (★Although this is not a SIP approved rule, it is applicable because it is part of the approved SMAQMD Title V Permit Program.)
		208	Acid Rain	No - It is not a SIP approved rule. Note: there is an equivalent federal regulation.
		209	Limiting Potential to Emit	No - It is not a SIP approved rule.
		210	Synthetic Minor Source Status	No - It is not a SIP approved rule.
		211	MACT at Major Sources of Hazardous Air Pollutants	No - It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.			
Rule	Rule	Rule	Rule Title		e Rule an "Applicable Federally Enforceable irement"?
		213	Federal Major Modifications	No -	It is not a SIP approved rule.
		215	Agricultural Permit Requirements and New Agricultural Permit Review	No -	It is not a SIP approved rule.
		250	Sacramento Carbon Exchange Program	No -	It is not a SIP approved rule.
•	*	301	Stationary Source Permit Fees	Yes -	Related conditions are included in the permit. (*Although this is not a SIP approved rule, it is applicable because it is part of the approved SMAQMD Title V Permit Program.)
		302	Hearing Board Fees	No -	It is not a SIP approved rule.
		303	Agricultural Burning Permit Fees	No -	It is not a SIP approved rule.
		304	Plan Fees	No -	It is not a SIP approved rule.
		305	Environmental Document Preparation and Processing Fees	No -	It is not a SIP approved rule.
•		306	Air Toxics Fees	No -	It is not a SIP approved rule.

Rule is Applicable	Rule is SIP Approved	Rule No.		la tha Dula an "Annliachla Eadarath, Enfarcachla
Rule is Applica	Rule	Ruk	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
•	•	307	Clean Air Act Fees 09-26-2002 version	Yes - No related conditions are included in the permit because of limited applicability.
		310	Permit Fees - Agricultural Source	No - It is not a SIP approved rule
		311	Registration Fees for Agricultural Compression Ignition Engines	No - It is not a SIP approved rule
		350	Greenhouse Gas Program Fees	No - It is not a SIP approved rule
•	•	401	Ringelmann Chart 04-05-1983 version	Yes - Related conditions are included in the permit.
•		402	Nuisance	No - It is not a SIP approved rule.
•	•	403	Fugitive Dust 11-29-1983 version	Yes - Related conditions are included in the permit.
•	•	404	Particulate Matter 11-20-1984 version	Yes - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
	•	405	Dust and Condensed Fumes 11-29-1983 version	No - The source does not operate such a process.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
•	•	406	Specific Contaminants 11-29-1983 version	Yes - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
•	•	407	Open Burning 11-29-1983 version	Yes - No related conditions are included in the permit because the source does not conduct open burning.
	•	408	Incinerator Burning 11-29-1983 version	No - The source does not operate an incinerator.
	•	409	Orchard Heaters 11-29-1983 version	No - The source does not operate orchard heaters.
	•	410	Reduction of Animal Matter 11-29-1983 version	No - The source does not operate equipment for the reduction of animal matter.
•	•	411	Boiler NOx 08-23-2007 version	Yes - Related conditions are included in the permit.
•	•	412	Stationary IC Engines at Major Stationary Sources of NOx 06-01-1995 version	Yes - Related conditions are included in the permit.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
•	•	413	Stationary Gas Turbines 03-24-2005 version	Yes - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
•	•	414	Natural Gas Fired Water Heaters 08-01-1996 version	Yes - No related conditions are included in the permit.
		417	Wood Burning Appliances	No - It is not a SIP approved rule.
•	•	420	Sulfur Content of Fuels 11-29-1983 version	Yes - Related conditions are included in the permit. (see discussion of streamlining applicable requirements)
		421	Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning	No - It is not a SIP approved rule
•	•	441	Organic Solvents 11-29-1983 version	Yes - No related conditions are included in the permit because of limited applicability.
•	•	442	Architectural Coatings 09-05-1996 version	Yes - Related conditions are included in the permit.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title		e Rule an "Applicable Federally Enforceable uirement"?
	•	443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing 09-05-1996 version	No -	The source does not operate synthetic organic chemical or polymer manufacturing equipment.
	•	444	Petroleum Solvent Dry Cleaning 11-29-1983 version	No -	The source does not operate petroleum solvent dry cleaning equipment.
	•	446	Storage of Petroleum Products 11-16-1993 version	No -	The source only stores petroleum products in tanks that are exempt from the rule requirements (< 40,000 gallons.)
	•	447	Organic Liquid Loading 04-02-1998 version	No -	The source does not operate organic liquid loading equipment.
•	•	448	Gasoline Transfer into Stationary Storage Containers 02-02-1995 version	Yes	- Related conditions are included in the permit.
•	•	449	Transfer of Gasoline into Vehicle Fuel Tanks 09-26-2002 version	Yes	- Related conditions are included in the permit.
	•	450	Graphic Arts Operations 10-23-2008 version	No -	The source does not operate a graphic arts process as defined in the rule.

Rule is Applicable	Rule is SIP Approved	Rule No.		le the	e Rule an "Applicable Federally Enforceable
Rul	Rul	Rul	Rule Title		irement"?
•	•	451	Surface Coating of Miscellaneous Metal Parts and Products 11-29-1983 version	Yes -	No related conditions are included in the permit because of limited applicability.
	•	452	Can Coating 09-25-2008 version	No -	The source does not operate a can coating process.
	•	453	Cutback and Emulsified Asphalt Paving Materials 11-29-1983 version	No -	The source does not manufacture or apply cutback or emulsified asphalt paving materials.
	•	454	Degreasing Operations 09-25-2008 version	No -	The source does not operate degreasers subject to this rule.
	•	455	Pharmaceuticals Manufacturing 11-29-1983 version	No -	The source does not manufacture pharmaceuticals.
	•	456	Aerospace Coating Operations 10-23-2008 version	No -	The source does not coat aerospace parts.
		457	Methanol Compatible Tanks	No -	It is not a SIP approved rule.
	•	458	Large Commercial Bread Bakeries 09-05-1996 version	No -	The source does not produce bread products.

Rule is Applicable	Rule is SIP Approved	Š.		
Rule is Applica	Rule Appr	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	•	459	Automotive, Truck and Heavy Equipment Refinishing Operations 10-02-1997 version	No - The source does not refinish vehicles.
•		460	Adhesives and Sealants	No - It is not a SIP approved rule.
•	•	463	Wood Products Coatings 09-25-2008 version	Yes - No related conditions are included in the permit because of limited applicability.
	•	464	Organic Chemical Manufacturing Operations 07-23-1998 version	No - The source does not manufacture organic chemicals.
		465	Polyester Resin Operations	No - It is not a SIP approved rule.
•		466	Solvent Cleaning 05-23-2002 version	Yes - Related conditions are included in the permit.
		485	Municipal Landfill Gas	No - It is not a SIP approved rule.
		496	Large Confined Animal Facilities	No - It is not a SIP approved rule.
	•	501	Agricultural Burning 11-29-1983 version	No - The source does not conduct agricultural burning.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title		e Rule an "Applicable Federally Enforceable uirement"?
•		601	Procedure before the Hearing Board	No -	It is not a SIP approved rule.
•		602	Breakdown Conditions: Emergency Variance	No -	It is not a SIP approved rule.
	•	701	Emergency Episode Plan 05-27-1999 version	No -	Facility emissions are less than 50 tons/year of ROC and NOx and less than 100 tons/year of CO and PM10.
•		801	New Source Performance Standards	No -	It is not a SIP approved rule. Note: there are equivalent federal regulations.
		901	General Requirements	No -	It is not a SIP approved rule. Note: there are equivalent federal regulations.
		902	Asbestos	No -	It is not a SIP approved rule. Note: there is an equivalent federal regulation.
		903	Mercury	No -	It is not a SIP approved rule. Note: there is an equivalent federal regulation.

S	cable	s of	9				
Rule	Applicable	Rule IS Approv	ତ୍ର <u>୭</u> ଅ Rule Title		Is the Rule an "Applicable Federally Enforceable Requirement"?		
•	•		904	Airborne Toxic Control Measures	No -	It is not a SIP approved rule. Note: there are equivalent federal regulations for some of the listed ATCMs.	
			1002	Fleet Inventory	No -	It is not a SIP approved rule.	
			1003	Reduced-Emission Fleet Vehicles/Alternative Fuels	No -	It is not a SIP approved rule.	
			1005	Mobile Source Emission Reduction Credits/Banking	No -	It is not a SIP approved rule.	
			1006	Transportation Conformity	No -	It is not a SIP approved rule.	

ATTACHMENT B

SMAQMD RULE 201 PERMITS TO OPERATE

FOR THE UNIVERSITY OF CALIFORNIA, DAVIS MEDICAL CENTER